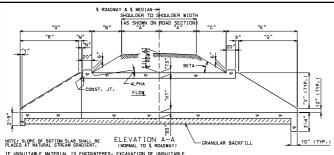


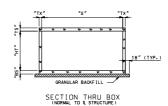
GENERAL NOTES:
ALL DIMENSIONS SHOWN ARE IN INCH UNLESS OTHERWISE NOTED.
JI BARS MAY BE BENT IN FIELD DR SHOP.
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2"
UNLESS OTHERWISE SHOWN.
FOR DIMENSIONS AND 51ZE AND SPACING OF REINFORCING STEEL.
SEE STANDARD SHEET 70%. 37.

OF DETAILS OF REINFORCEMENT IN WINGS. SEE STANDARD
SHEET 70%. 37.

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION					
	CONCRETE SINGLE BOX STRUCTURE FLARED WINGS (SQUARE)				
DATE:	EFFECTIVE: 07-01-2004	703.11F	2/3		

MICCOURT HISCHWAY AND TRANSPORTATION





IF UNSUITABLE MATERIAL IS ENCOUNTERED, EXCAVATION OF UNSUITABLE MATERIAL AND FURNISHING AND PLACING OF GRANULAR BACKFILL SHALL BE IN ACCORDANCE WITH SEC. 206.

GE	NERAL DATA TABLE		
VAR1ABLE	DIMENSION (fn.)		
ALPHA	SEE EQUATIONS		
BETA	BETA SEE EQUATIONS		
"B"	SEE EQUATIONS		
"c "	SEE EQUATIONS		
"D"	R + M + N + 20"		
"E "	G + 23"		
"F"	S + 2TX		
"G"	2V		
"L"	"L" 2A + B + C + D + E "M" N(COS 20")		
"M"			
"N"	3" + TX(TAN 10")		
"P"	2V(SEC 20*)		
"Q"	TX(COS 20°)		
"R"	P(COS 20°)		
"U"	"U" (R + M)(TAN 20°)		
"V"	"V" HT + TS - 12"		
"Y"	"Y" TX(SIN 20°) "KK" 5/2 + U		
"KK"			

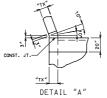
GENERAL NOTES: DESIGN SPECIFICATIONS: AASHTO - 2002 LOAD FACTOR DESIGN

DESIGN UNIT STRESSES: CLASS B-1 CONCRETE f'o = 4,000 ps! REINFDRCING STEEL (GRADE 60). fy = 60,000 ps!

DESIGN LOADING: EARTH 120 #/ft, 3 EQUIVALENT FLUID PRESSURE 30 #/ft, 3 (MIN.) - 60 #/ft, 5 (MAX.) ALL DIMENSIONS SHOWN ARE IN INCHES

THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

FOR DIMENSIONS NOT SHOWN, SEE STANDARD SHEETS 703.11, SHEETS 1 & 2 OF 3 OR 703.15.





NULL: WHEN ALTERNATE PRECAST BOX SECTIONS ARE USED, THE MINIMUM BARREL LENGTH WEASURED ALONG THE SHORTEST WALL FROM THE FIRST JOINT AND THE OUTSIDE OF THE HEADMALL SHALL BE 3-2-2. REIN-GROEMENT AND DIMENSIONS FOR THE WINGS AND HEADWALLS SHALL BE IN ACCORDANCE WITH MISSOUR! STANDARD PLANS ORAWINGS.

EQUATIONS FOR COMPUTING LENGTH OF BARRELS

LET ALPHA = ANGLE OF SLOPE OF BARREL WITH HORIZONTAL ALONG

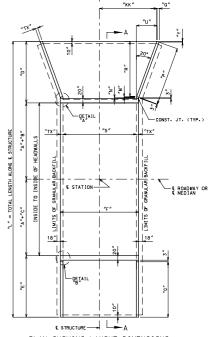
LET BETA = ANGLE OF SLOPE OF FILL NORMAL TO & ROADWAY.

"B" OR "C" = (FILL AT € ROADWAY)±(CROSS-SLOPE) X "A"± A TAN(ALPHA)
TAN(BETA) ± TAN(ALPHA)

"B" OR "C" - HORIZONTAL DISTANCE FROM EDGE OF SHOULDER TO HEADWALL NORMAL TO & OF ROADWAY.

DEFINITIONS

CROSS-SLOPE: SLOPE OF EACH PART OF THE ROADWAY INCLUDING ROADWAY CROWN. SHOULDER SLOPE. AND/OR SUPERELEVATION. SEE DESIGN ROADWAY CROSS SECTION FOR LANE AND SHOULDER WIDTHS AND SLOPES.



FLOW

PLAN SHOWING LAYOUT DIMENSIONS

MIS	SSOURI HIGHWAY AND COMMISSIO	TRANSPORTATION ON	
	FLA	DNCRETE BOX STRUCTURE RED WINGS SQUARE)	
DATE:	EFFECTIVE: 07-01-2004	703.11F	3/3